I. PURPOSE

To provide guidelines for management of labor pain

II. REFERENCES

UCSF Medical Center Administrative Policy 6.07.15, Pain Management.

ACOG (2002). Obstetric Analgesia and Anesthesia. ACOG Practice Bulletin #36, Washington DC: American College of Obstetricians and Gynecologists.

Burke, C. (2014). "Pain in Labor: Nonpharmacologic an Pharmacologic Management," Ch. 16, pp 493-529, in Simpson, K.R., & Creehan, P.A. (Eds) AWHONN's Perinatal Nursing 4th Ed), Philadelphia: Lippincott.

III. DEFINITIONS/CRITICAL POINTS

None

IV. POLICY

It is the policy of UCSF Benioff Children's Hospital to manage labor pain. The management of labor pain is different than acute or chronic pain, in that pain is a part of the labor process which patients often choose to experience rather than alleviate. Pain, increasing in intensity and frequency, is often a sign of labor progress and may be interpreted as a positive sign rather than a sign that something is wrong. Labor pain has many psychological associations that cause women to choose to experience it rather than to detract from it. To assess pain, we use the 0–10 pain scale when appropriate per patient condition but it also may be described as a narrative description in patients who do not want to be asked about the pain in order to attempt to shift their focus from it.

Because fear, anxiety, exhaustion, and discouragement are often major components of the labor experience, non-pharmacological interventions and education are important. (See "non-pharmacologic strategies" below).

V. PROCEDURE

CRITICAL POINT OF COPING/PAIN

Every patient admitted to labor and delivery, as well as antepartum patients whose delivery is anticipated, should be met by an anesthesiologist after initial evaluation by the primary obstetrical provider. The purpose of this meeting is for the patient to become familiar with available pain management options and for the anesthesia provider to be familiar with patient history and physical exam information and patient-specific conditions that may require special attention and to improve patient safety.

A. **INITIAL ASSESSMENT and EVALUATION OF COPING/PAIN** is usually accomplished by the team and includes:
   1. Absence or presence of pain
   2. Location and characteristics (to rule out pain that may be other than labor (e.g. chronic pain, abruption, infection, uterine rupture, etc.)
   3. Intensity: 0-10, using the coping scale or the pain scale, as appropriate for the patient
   4. Identify aggravating and relieving factors
   5. Assess and reassess the effectiveness of initiated interventions.

B. **ONGOING ASSESSMENT and EVALUATION OF COPING/PAIN**:

1. Coping/pain assessment is important to evaluate on an ongoing basis for the duration of labor. Frequency of assessment may be modified by agreement between the patient and the obstetrical team.
2. Coping/pain assessments should be documented with each complete set of vital signs and as indicated by patient condition. RN assessment of, interventions for, and evaluation of coping/pain will be documented on the patient's labor flow sheet.
3. After an intervention for pain is given, the RN will assess efficacy in a timely manner (within 30 min after IV pain medication or within 90 min after PO or non-pharmacologic interventions) and document pain reassessment. At the end of the shift, the RN will assess and document if the pain management regimen has been appropriate/adequate for the patient. Refer to Pain Assessment (General) in the Medical Center Nursing Procedures Manual

PART I: OPTIONS FOR PAIN MANAGEMENT

Non-pharmacologic Strategies May Include:

- Relaxation/breathing techniques
- Distraction (e.g., music, humor, conversation, movies, audiotapes)
- Changing positions or birthing ball
- Shower, bathtub
- Prayer or ritual
- Cutaneous stimulation/physical therapies (e.g., heat, cold, massage, vibration, TENS, pressure, movement, positioning, acupressure, counter-pressure)
- Imagery/guided imagery
- Hypnosis/self-hypnosis
- Support persons
- Other methods not listed here that the patient finds therapeutic

Pharmacologic Strategies

Opioids:

A. **Fentanyl IV**, (given as 50 mcg q 20 min with max dose of 600 mcg over 24 hours). Caution is recommended when dosing exceeds 600 mcg in a 24-hour period; consultation with the OB and anesthesia providers is required for additional dosing.

- Available at any time during labor, with consideration for the timing of opioid administration before anticipated birth in order to minimize potential respiratory depression of the neonate. If birth does occur within the hour of the last fentanyl dose, pediatricians should be present at birth for assessment.

B. "**Morphine Sleep**": To induce therapeutic rest (sedative analgesia) in patients with prodromal or ineffective labor pattern: Suggested dosing is Morphine 10-15 mg IM with Promethazine (Phenergan) 25 mg IM or alternative such as Hydroxine per provider order.

C. **Opioid IV PCA for Labor** (patient-controlled analgesia) may be used for patients that are unable to receive an epidural for medical reasons. The dosing

orders are set by the anesthesiologist while the PCA pump and monitoring is done by the bedside nurse. See PCA IV ALARIS PUMP: DIRECTIONS FOR USE for pump setup instructions.

1. Opioid IV PCA for labor is managed by Anesthesia.
2. REMIfentanil is the preferable opioid for IV PCA for labor analgesia
3. Alternate opioids may be indicated in specific patient circumstances. (e.g. HYDROmorphone in a case of intrauterine fetal demise)
4. PCA to be used only while in Labor/Intrapartum
5. Notify OB anesthesia for IV PCA dose changes, inadequate pain control, or management of side effects such as itching, nausea, respiratory depression, somnolence, or bradycardia
6. Patient should be on clear liquid diet.
7. Only the patient, no family members or staff, may push the PCA button
8. Ambulation may only occur 10 minutes after using the PCA button. Patients must abstain from pushing the button as a method to aide with ambulation.
9. Pediatricians should be present at birth for assessment
10. Oxygen at a minimum of 2L via NC for the duration of the PCA to maintain O2 saturation >95%
11. Nursing is responsible for pump programming and will complete the two-provider independent check line priming with the anesthesia provider.
12. Connect Opioid PCA as proximal to the patient as possible.
13. IV fluid minimum rate 75 ml/hr
14. Monitoring of the patient during the PCA infusion by the RN should include:
    a. Continuous pulse oximetry
    b. Complete VS per patient condition, SEE PCA policy
    c. Respiratory rate, sedation level and pain score
    d. Total drug amount infused
15. Stop infusion and call OB anesthesia and OB primary team for severe respiratory depression (RR <10, SpO2 <95%) or somnolence (sedation=4)
16. Discontinue PCA orders immediately after birth of baby. (If additional pain relief needed for repair or placental removal, contact OB anesthesia.)

Analgesic Strategies

A. Nitrous Oxide:

1. 50% nitrous oxide in oxygen (by Nitronox machine only)
2. Upon initiation, Nitronox machine should be checked for proper functioning including appropriate readings on all line/tank pressure gauges, N2O/O2 mixture gauge and scavenging system. The individual line pressures for both nitrous and oxygen should read approximately in the green area on the gauges (40-65 psi) and the mixture pressure should read approximately in the green area on the mixture gauges (25-45 psi).
3. A HME filter should be applied adjacent to the mask.
4. May be administered anytime and for any duration during labor or immediate postpartum procedures
5. Should not be considered in individuals with acute respiratory illness and/or respiratory infectious pathogens.

6. If nitrous is used for any procedure other than labor, anesthesia must be notified. If the patient has a history of recent eye surgery, pneumothorax, small bowel obstruction, B12 deficiency or previous adverse experience please notify anesthesia prior to nitrous initiation.
7. Must be self-administered by patient (the patient holds the mask). Never held by family member or support person or affixed to the patient.
8. Intravenous access is desirable, but not required, for nitrous oxide administration.
9. Vital signs and monitoring:
   a. Pulse oximetry spot check should be done at least hourly.
10. Patient may NOT receive additional opioids during nitrous oxide administration without approval of an anesthesiologist (combinations of nitrous oxide and opioids can result in respiratory depression, hypoxia, and unconsciousness)
    a. Nitrous can be started as early as 6 hours after "Morphine Sleep" (without consultation with anesthesia)
    b. Nitrous can be started at any time following discontinuation of fentanyl
    c. Once nitrous has been started and is in use, no additional opioids can be given without an OB anesthesia consultation unless nitrous use is discontinued
    d. If nitrous use is discontinued, opioids can be given immediately without the need for anesthesia consult
    e. If an epidural is in use, OB anesthesia must be consulted if there is a desire for nitrous to be used in conjunction

B. **Neuraxial Labor Analgesia and Anesthesia** (refer to the Perinatal Neuraxial Analgesia and Anesthesia policy in The Birth Center Policy/ Procedure Manual)

C. **Pudendal block:**
1. 1% lidocaine
2. May be performed for operative vaginal delivery by the provider/CNM
3. Dose should not exceed 25 mL

D. **Local infiltration:**
1. 1% lidocaine
2. May be performed by the provider/CNM for episiotomy repair alone, or to supplement labor analgesic block. Note: dose should not exceed 25 ml.

VI. RESPONSIBILITY

For questions regarding this policy contact The Birth Center Clinical Nurse Specialist.

VII. HISTORY OF THE POLICY

Author:

Issue Date:

Revised by: J. Airhart, RN, M. Killion, RN, M. Rollins, MD, M. P. Thiet, MD, July 2016; M. Killion, RN, 2014

Last Revision/Review: A. Britton, MD, J. Markley, MD, M. Duck, CNS, R. George, MD, August 2020

VIII. APPENDIX

None

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